IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Junichi KOMAGATA

Application No.: 10/751,530	Confirmation No.: 3306
Filed: January 6, 2004	Art Unit: 2465
For: DATA TRANSMITTING APPARATUS AND DATA TRANSMITTING METHOD	Examiner: A. M. Sol

APPELLANT'S BRIEF

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

INTRODUCTORY COMMENTS

This is an Appeal Brief under 37 C.F.R. §41.37 appealing the final decision of the Examiner dated February 17, 2010.

Each of the topics required by 37 C.F.R. §41.37 is presented herewith and is labeled appropriately.

This brief is in furtherance of the Final Office Action on February 17, 2010.

In response to the Final Office Action of February 17, 2010, a Notice of Appeal was filed in this case on July 14, 2010, along with a Request for Panel Review.

The Notice of Panel Decision From Pre-Appeal Brief Review dated September 30, 2010 ("the Decision") indicates that claims 27-48 remain rejected.

The Decision further indicates that the extendable time period for the filing of the Appellant's Brief will be reset to be one month from the mailing of the Decision.

October 30, 2010, one month after the mailing of the Decision, falls on a Saturday.

Accordingly, the period for response is extended to November 1, 2010, which is the next day that is neither a Saturday, Sunday nor a Federal holiday in the District of Columbia.

Thus, the filing of this Appellant's Brief is timely. 37 C.F.R. §1.136.

I.   REAL PARTY IN INTEREST

Sony Corporation of Tokyo, Japan ("Sony") is the real party in interest of the present application. An assignment of all rights in the present application to Sony was executed by the inventor and recorded by the U.S. Patent and Trademark Office at **Reel 014874, Frame 0481.**

II.   RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences that will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

Within the Final Office Action of February 17, 2010:

The status of the claims is as follows:

Claims 1-26	Canceled
Claims 27-48	Rejected

No claims are indicated within the Final Office Action to contain allowable subject matter.

Accordingly, Appellant hereby appeals the final rejection of claims 27-48 which are presented in the Claims Appendix.

IV.   STATUS OF AMENDMENTS

Provided is a statement of the status of any amendment filed subsequent to final rejection.

Subsequent to the final rejection of February 17, 2010, **no Amendment** has been filed in this case.

V.   SUMMARY OF CLAIMED SUBJECT MATTER

The following description is provided for illustrative purposes and is not intended to limit the scope of the invention.

27. A data transmitting method comprising the steps of:	
confirming presence or absence of a real time packet request (S51), said real time packet request commanding a stream transmitting portion to schedule a transmission of a real time packet;	Paragraph beginning at page 26, line 22
confirming presence or absence of a non-real time packet request (S54) only after confirming the absence of said real time packet request (S51), said non-real time packet request commanding said stream transmitting portion to schedule a transmission of a non-real time packet.	

36. A data transmitting apparatus comprising:	
packetizing blocks (11-14) configured to packetize streams of data (RD1-3, ND1) into streams of packets (RS1-3, NS1), said streams being streams of real time packets (RS1-3) and a stream of non-real time packets (NS1);	Paragraph beginning at page 9, line 15
a stream transmitting portion (15) configured to confirm presence or absence of a real time packet request (S51) and to confirm presence or absence of a non-real time packet request (S54), the presence or absence of the non-real time packet request being confirmed only after confirming the absence of said real time packet request.	Paragraph beginning at page 26, line 22

VI.   GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The issues presented for consideration in this appeal are as follows:

Whether the Examiner erred in rejecting claims 27-28, 31-33, 35-40, 42-44, and 48 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,560,230 (Li).

Whether the Examiner erred in rejecting claims 29, 30, 34, 41, and 45-47 under 35 U.S.C. 103(a) as being unpatentable over Li in view of U.S. Patent Application Publication No. 2004/0114516 (Iwata).

These issues will be discussed hereinbelow.

VII. ARGUMENT

For at least the following reasons, Appellant submits that these rejections are both technically and legally unsound and should therefore be reversed.

For purposes of this appeal brief only, and without conceding the teachings of any prior art reference, the claims have been grouped as indicated below.

i. The Examiner erred in rejecting claims 27-28, 31-33, 35-40, 42-44, and 48 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,560,230 (Li).
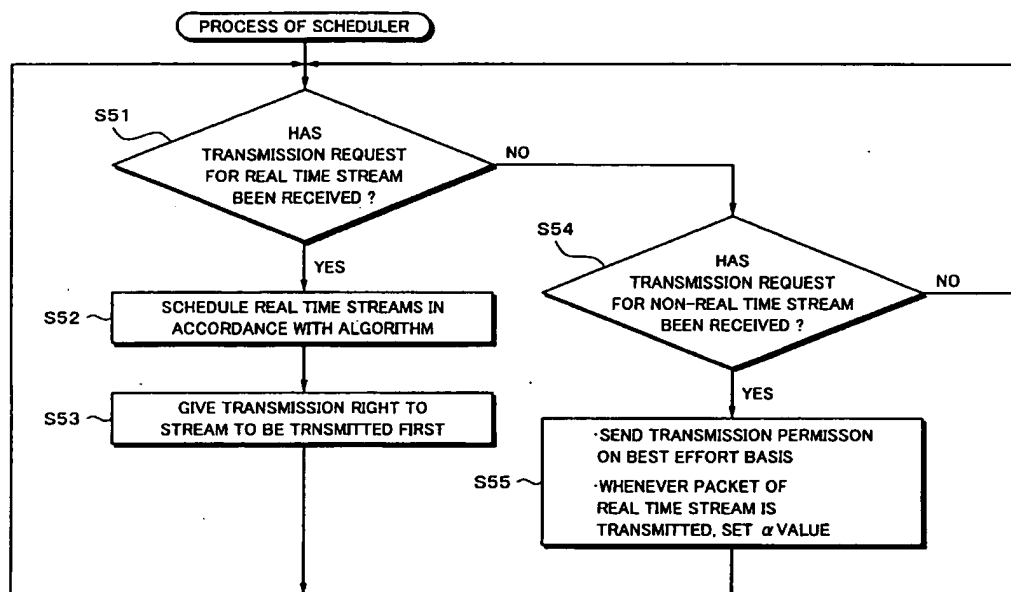
A. For this rejection, claims 27-28, 31-33, 35-40, 42-44, and 48 stand or fall together.

1. Claims 28, 31-33, 35-36 are dependent upon claim 27.

27. A data transmitting method comprising the steps of:	
confirming presence or absence of a real time packet request (S51), said real time packet request commanding a stream transmitting portion to schedule a transmission of a real time packet;	Paragraph beginning at page 26, line 22
confirming presence or absence of a non-real time packet request (S54) only after confirming the absence of said real time packet request (S51), said non-real time packet request commanding said stream transmitting portion to schedule a transmission of a non-real time packet.	

Figure 12 of the specification for the claims on appeal is provided hereinbelow.
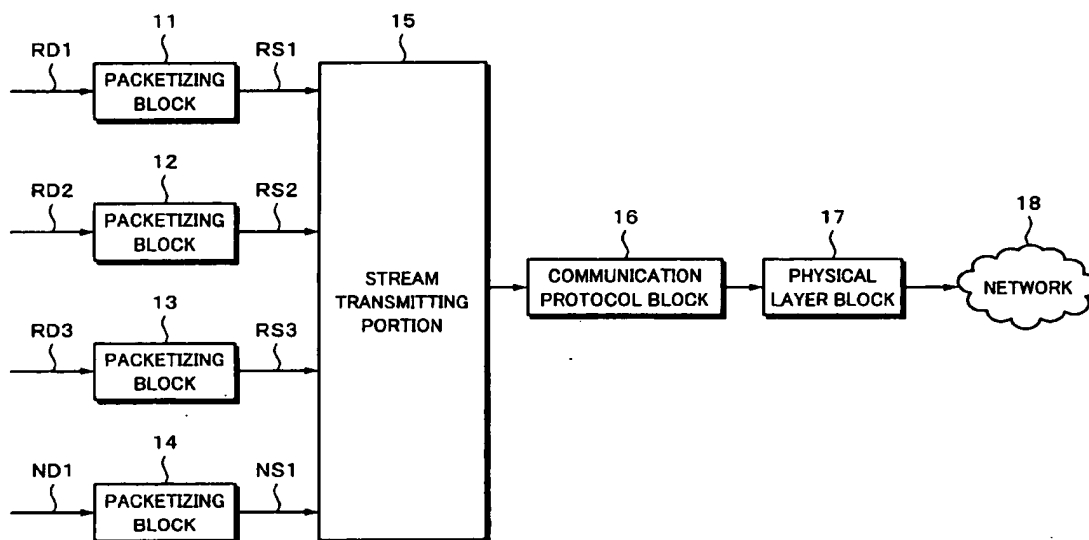
Fig. 12

```
            ( PROCESS OF SCHEDULER )

    S51          HAS
              TRANSMISSION REQUEST           NO
              FOR REAL TIME STREAM
                BEEN RECEIVED ?

                     │ YES                S54          HAS
                                                 TRANSMISSION REQUEST      NO
    S52 ─  SCHEDULE REAL TIME STREAMS IN         FOR NON-REAL TIME STREAM
           ACCORDANCE WITH ALGORITHM               BEEN RECEIVED ?

                                                         │ YES

    S53 ─    GIVE TRANSMISSION RIGHT TO        ·SEND TRANSMISSION PERMISSON
           STREAM TO BE TRNSMITTED FIRST        ON BEST EFFORT BASIS
                                          S55 ─ ·WHENEVER PACKET OF
                                                REAL TIME STREAM IS
                                                TRANSMITTED, SET α VALUE
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2.   Claims 37-40, 42-44, and 48 are dependent upon claim 36.

36. A data transmitting apparatus comprising:	
packetizing blocks (11-14) configured to packetize streams of data (RD1-3, ND1) into streams of packets (RS1-3, NS1), said streams being streams of real time packets (RS1-3) and a stream of non-real time packets (NS1);	Paragraph beginning at page 9, line 15
a stream transmitting portion (15) configured to confirm presence or absence of a real time packet request (S51) and to confirm presence or absence of a non-real time packet request (S54), the presence or absence of the non-real time packet request being confirmed only after confirming the absence of said real time packet request.	Paragraph beginning at page 26, line 22

Figure 3 of the specification for the claims on appeal is provided hereinbelow.

Fig. 3

RD1 → **11** PACKETIZING BLOCK → RS1

RD2 → **12** PACKETIZING BLOCK → RS2

RD3 → **13** PACKETIZING BLOCK → RS3

ND1 → **14** PACKETIZING BLOCK → NS1

15 STREAM TRANSMITTING PORTION → **16** COMMUNICATION PROTOCOL BLOCK → **17** PHYSICAL LAYER BLOCK → **18** NETWORK

A. U.S. Patent No. 6,560,230 (Li).

1. Li *fails* to disclose, teach, or suggest confirming presence or absence of a real time packet request.

Li arguably discloses that after the packets are classified they *can be scheduled for transmission* (Li at column 6, lines 33-34).

Scheduler 50 schedules the transmission of the packet out an output port (Li at column 8, lines 29-30).

However, Li *fails to identify any request* that commands the scheduler 50 *to schedule the transmission* of a packet.

FIG. 5 is a schematic view of apparatus for scheduling packets according to the invention
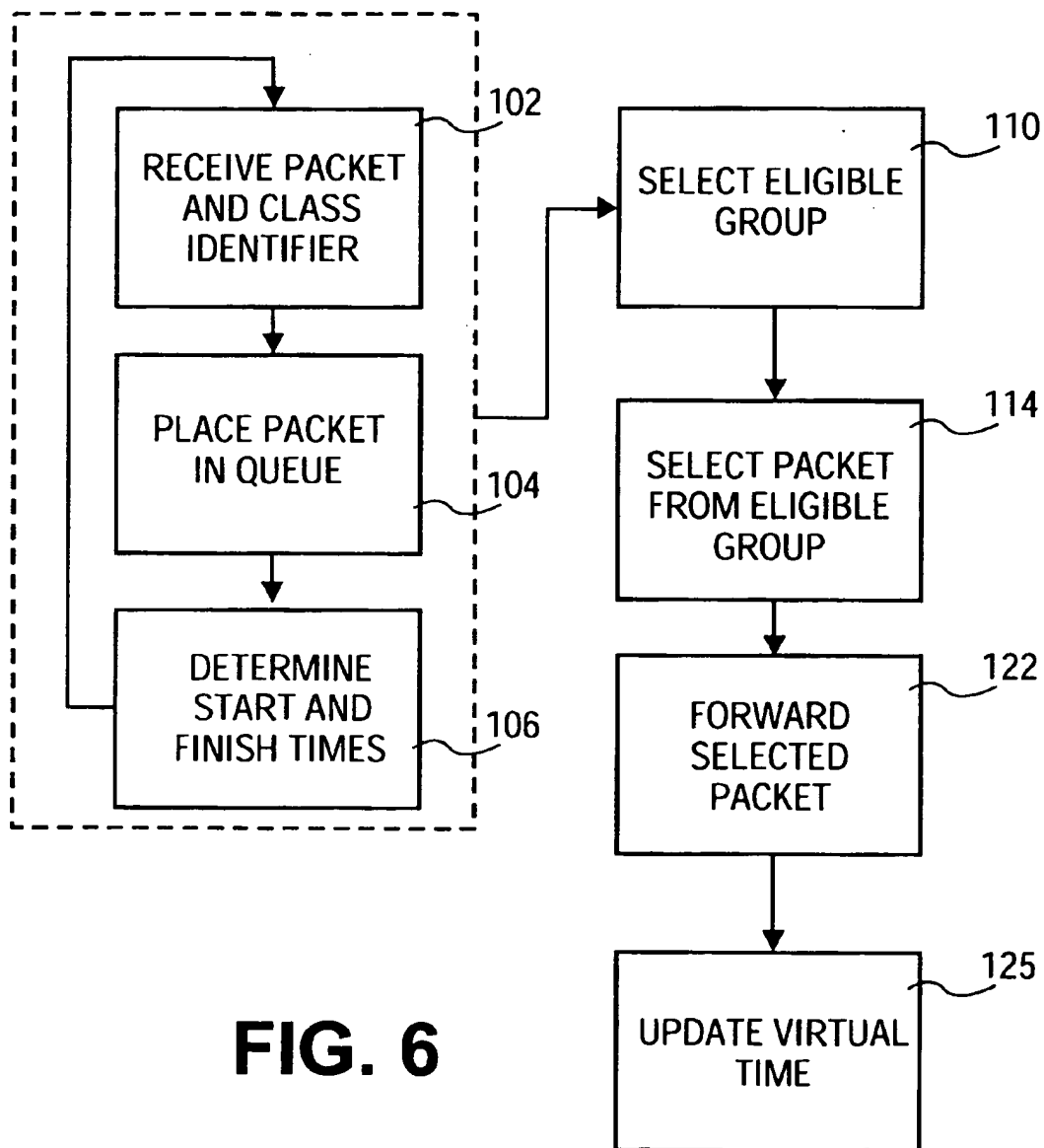
Figure 5 of Li is provided hereinbelow.
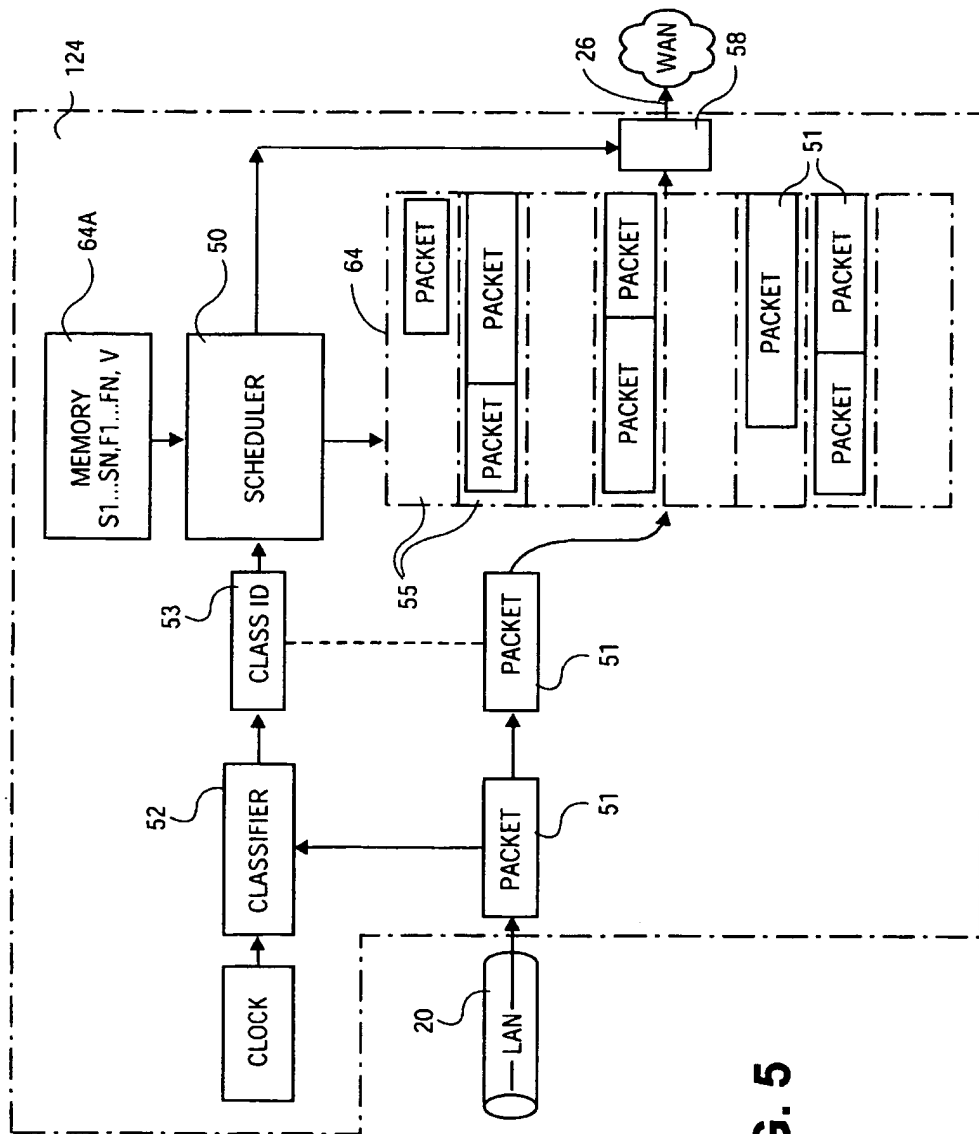
FIG. 5

FIG. 6 is a flow chart illustrating a method according to the invention by which leaf
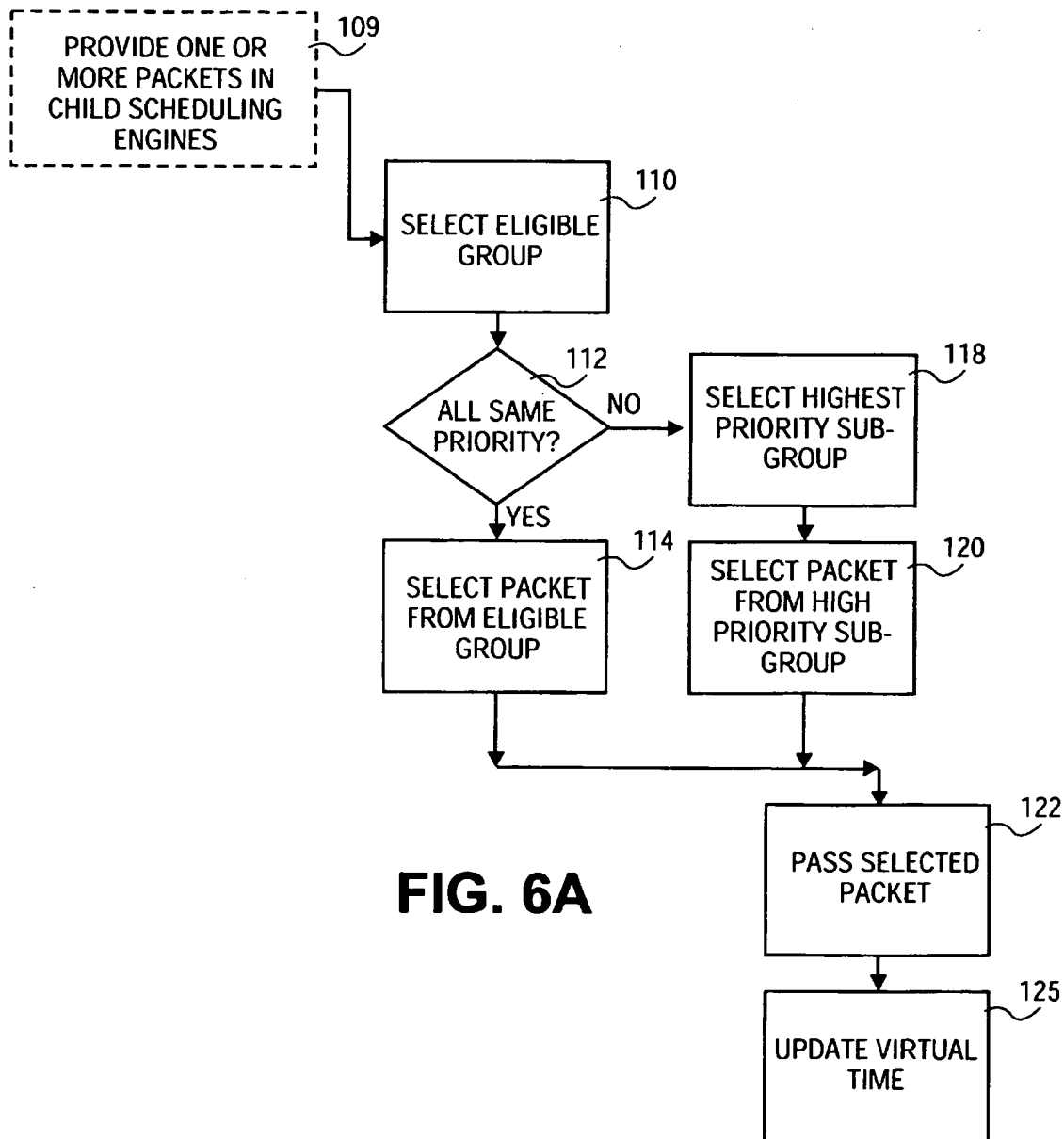
scheduling engines may select and transmit packets.

Figure 6 of Li is provided hereinbelow.

FIG. 6

FIG. 6A is a flow chart illustrating a method according to the invention by which non-leaf scheduling engines may select and transmit packets.

Figure 6A of Li is provided hereinbelow.

```
+---------------------------+  109
! PROVIDE ONE OR            !
! MORE PACKETS IN           !
! CHILD SCHEDULING          !
! ENGINES                   !
+---------------------------+
```

SELECT ELIGIBLE GROUP — 110

ALL SAME PRIORITY? — 112

NO → SELECT HIGHEST PRIORITY SUB-GROUP — 118

YES → SELECT PACKET FROM ELIGIBLE GROUP — 114

SELECT PACKET FROM HIGH PRIORITY SUB-GROUP — 120

PASS SELECTED PACKET — 122

UPDATE VIRTUAL TIME — 125

FIG. 6A

As shown in FIGS. 5 and 6, a scheduler 50 _receives_ each incoming packet 51 together with a class identifier 53 generated by a classifier 52 (**step 102**) (Li at column 8, lines 34-36).

Here, **_Step 102_** of Li _fails to identify any request_ that commands the scheduler 50 to schedule the transmission of a packet.

Scheduler 50 then **_places_** each packet in a queue 55 (**step 104**) (Li at column 8, lines 36-37).

Here, **_Step 104_** of Li _fails to identify any request_ that commands the scheduler 50 to schedule the transmission of a packet.

In a preferred implementation of scheduler 50, each leaf scheduling engine 60 **_calculates_** a start time S and a finish time F for packets 51 at the heads of its queues 55 (**step 106**) (Li at column 10, lines 16-19).

Here, **_Step 106_** of Li _fails to identify any request_ that commands the scheduler 50 to schedule the transmission of a packet.

According to the preferred embodiment of the invention, each leaf scheduling engine 60 _selects_ a group of eligible packets 51 from the group of all packets 51 at the heads of the queues 55 in the group 56 associated with that leaf scheduling engine 60 (**step 110**) (Li at column 11, lines 3-7).

Here, **_Step 110_** of Li _fails to identify any request_ that commands the scheduler 50 to schedule the transmission of a packet.

In preferred embodiments of the invention, the leaf scheduling engine 60 will _select_ for transmission the eligible packet 51 which meets a selection criterion (**step 114**) (Li at column 11, lines 35-37).

Here, *Step 114* of Li *fails to identify any request* that commands the scheduler 50 to schedule the transmission of a packet.

Eventually the selected packet *will be passed* to the parent of the leaf scheduling engine 60 (**step 122**). (Li at column 11, lines 58-60).

Here, *Step 112* of Li *fails to identify any request* that commands the scheduler 50 to schedule the transmission of a packet.

At that time, the virtual time V of the leaf scheduling engine 60 *will be updated* (**step 125**) and leaf scheduling engine 60 *will select* a new packet 51 (**step 114**) from a queue 55 for eventual transmission (Li at column 11, lines 60-63).

Here, *Step 125* of Li *fails to identify any request* that commands the scheduler 50 to schedule the transmission of a packet.

Any packet in the eligible set which does not have the highest priority is *removed* from the set (**step 118**) (Li at column 13, lines 13-15).
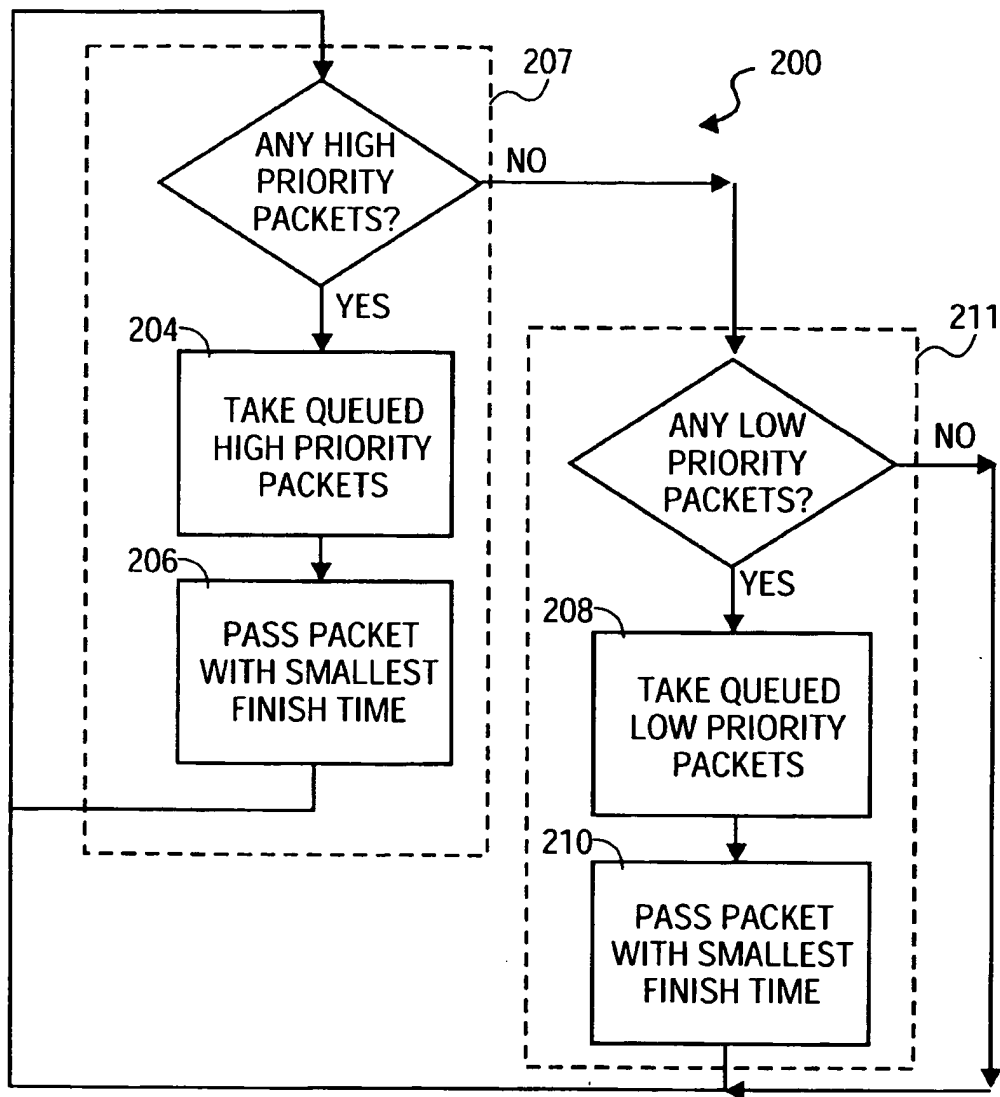
Here, *Step 118* of Li *fails to identify any request* that commands the scheduler 50 to schedule the transmission of a packet.

After an eligible set has been constructed then the parent scheduling engine 60 *selects* one packet to pass on next to its parent scheduling engine according to a selection criterion (**step 114 or 120**) (Li at column 13, lines 24-27).

Here, *Step 114 or 120* of Li *fails to identify any request* that commands the scheduler 50 to schedule the transmission of a packet.

FIG. 8 is a flow chart illustrating a simplified embodiment of the invention (Li at column 5, lines 15-16).

Figure 8 of Li is provided hereinbelow.

FIG. 8

Simplified method 200 begins by _**selecting**_ all high priority packets which are currently queued (**step 204**) (Li at column 13, lines 41-42).

Here, _**Step 204**_ of Li _**fails to identify any request**_ that commands the scheduler 50 to schedule the transmission of a packet.

The method continues by passing the one high priority packet having the smallest finish time F (**step 206**) (Li at column 13, lines 42-44). In the alternative, **step 206** could pass the packet having the smallest start time S (Li at column 13, lines 44-45).

Here, _**Step 206**_ of Li _**fails to identify any request**_ that commands the scheduler 50 to schedule the transmission of a packet.

If there are no queued high priority packets then the method selects all queued low priority packets (**step 208**) and continues by forwarding the low priority packet with the smallest finish time F (**step 210**) (Li at column 13, lines 45-49).

Here, _**Steps 208 and 210**_ of Li _**fail to identify any request**_ that commands the scheduler 50 to schedule the transmission of a packet.

As a consequence, Li _**fails**_ to disclose, teach, or suggest confirming presence or absence of a real time packet <u>request</u>.

Thus, Li **fails** to disclose, teach, or suggest a step of confirming presence or absence of a real time packet **request**, said real time packet **request** commanding a stream transmitting portion to schedule a transmission of a real time packet.

2. Li *fails* to disclose, teach, or suggest confirming presence or absence of a *non*-real time packet request.

As noted hereinabove, Li fails to identify any request that commands the scheduler 50 to schedule the transmission of a packet.

As a consequence, Li *fails* to disclose, teach, or suggest confirming presence or absence of a non-real time packet request.

Thus, Li fails to disclose, teach, or suggest a step of confirming presence or absence of a non-real time packet request only after confirming the absence of said real time packet request, said non-real time packet request commanding said stream transmitting portion to schedule a transmission of a non-real time packet.

ii. **The Examiner erred in rejecting claims 29, 30, 34, 41, and 45-47 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,560,230 (Li) in view of U.S. Patent Application Publication No. 2004/0114516 (Iwata).**

A. **For this rejection only, claims 29, 30, 34, 41, and 45-47 stand or fall together.**

1. **U.S. Patent No. 6,560,230 (Li).**

For the purpose of brevity, the argument presented hereinabove with respect to claims 27-28, 31-33, 35-40, 42-44, and 48 are incorporated herein by reference.

2. U.S. Patent Application Publication No. 2004/0114516 (Iwata).

a) Iwata *fails* to disclose, teach, or suggest confirming presence or absence of a non-real time packet *request* only after confirming the absence of said real time packet *request*.

Iwata arguably discloses that this packet scheduling apparatus comprises a packet input section 1, a packet queue group 2, *a scheduler section 3*, a packet dividing section 4, a packet output section 5 and a packet buffer 6 (Iwata at Paragraph [0026]).

Iwata arguably discloses that the *scheduler 32* notifies the packet output section 5 of the queue information (indicating the *premium packet queue 21 or the low priority packet queue 22*) included in the data at the top of the scheduling queue 31 at output start time, and *requests the packet output section 5 to transmit the packet* (Iwata at Paragraph [0039]).

Nevertheless, Iwata *fails* to disclose, teach, or suggest the confirmation of presence or absence of a request to transmission of a low priority packet only after confirming the absence of a request to transmission of a premium packet.

Thus, Iwata fails to disclose, teach, or suggest a step of confirming presence or absence of a non-real time packet request only after confirming the absence of said real time packet request, said non-real time packet request commanding said stream transmitting portion to schedule a transmission of a non-real time packet.

b) Iwata _fails_ to disclose, teach, or suggest the presence or absence of the non-real time packet _request_ being confirmed only after confirming the absence of said real time packet _request_.

As noted hereinabove, Iwata _fails_ to disclose, teach, or suggest the confirmation of presence or absence of a request to transmission of a low priority packet only after confirming the absence of a request to transmission of a premium packet.

*Thus, Iwata **fails** to disclose, teach, or suggest the presence or absence of the non-real time packet **request** being confirmed only after confirming the absence of said real time packet **request**.*

c) Iwata is _unavailable_ as prior art.

The above-identified application was filed on **January 6, 2004**.

Iwata has a publication date of **June 17, 2004**.

However, the filing date for the above-identified application of **January 6, 2004** is _earlier_ than the publication date of **June 17, 2004** for Iwata.

Iwata has a PCT filing date of June 28, 2001.

However, Iwata is in the national stage (35 U.S.C. 371) of an International Application filed on or after November 29, 2000 and which was _not published in English_ under PCT Article 21(2).

According to 35 U.S.C. 102 (e), **_no benefit of the international filing date_** (nor any U.S. filing dates prior to the IA) is given for 35 U.S.C. 102 (e) prior art purposes if the IA was published

under PCT Article 21(2) in a language other than English, regardless of whether the international application entered the national stage. M.P.E.P. §706.02(f)(1).

Thus, Iwata appears to be ***unavailable as prior art*** and that the rejection of the claims using this reference should be ***withdrawn*** as a result.

Conclusion

The claims are considered allowable for the same reasons discussed above, as well as for the additional features they recite.

Reversal of the Examiner's decision is respectfully requested.

Dated: November 2, 2010   Respectfully submitted,

By _____
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Correspondence Customer Number: 23353
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CLAIMS APPENDIX

1-26. (Canceled)

27. (Previously presented) A data transmitting method comprising the steps of:

confirming presence or absence of a real time packet request, said real time packet request commanding a stream transmitting portion to schedule a transmission of a real time packet;

confirming presence or absence of a non-real time packet request only after confirming the absence of said real time packet request, said non-real time packet request commanding said stream transmitting portion to schedule a transmission of a non-real time packet.

28. (Previously presented) The data transmitting method as set forth in claim 27, wherein the presence of said non-real time packet request is confirmed, said transmission of the non-real time packet being scheduled.

29. (Previously presented) The data transmitting method as set forth in claim 28, wherein scheduling times for the real time packets are compared to a transmission end time for the non-real time packet, said non-real time packet being transmitted prior to transmissions of the real time packets when said transmission end time for the non-real time packet occurs before any of the scheduling times.

30. (Previously presented) The data transmitting method as set forth in claim 28, wherein said non-real time packet is transmitted during a time interval between transmissions of the real time packets when said time interval is longer than a transmission time for the non-real time packet.

31. (Previously presented) The data transmitting method as set forth in claim 27, wherein a stream of text data is packetized into a stream of non-real time packets, said non-real time packet being from said stream of non-real time packets.

32. (Previously presented) The data transmitting method as set forth in claim 27, wherein the presence of said real time packet request is confirmed, said transmission of the real time packet being scheduled.

33. (Previously presented) The data transmitting method as set forth in claim 32, wherein said real time packet is transmitted prior to any other of the real time packets, a transmission end time for said real time packet being earlier than a transmission end time for said any other of the real time packets.

34. (Previously presented) The data transmitting method as set forth in claim 32, wherein transmission of said real time packet is separated in time from transmission of another real time packet by at least a transmission interval.

35. (Previously presented) The data transmitting method as set forth in claim 27, wherein streams of moving picture and audio data are packetized into streams of real time packets, said real time packet being from said streams of real time packets.

36. (Previously presented) A data transmitting apparatus comprising:

packetizing blocks configured to packetize streams of data into streams of packets, said streams being streams of real time packets and a stream of non-real time packets;

a stream transmitting portion configured to confirm presence or absence of a real time packet request and to confirm presence or absence of a non-real time packet request, the presence or absence of the non-real time packet request being confirmed only after confirming the absence of said real time packet request.

37. (Previously presented) The data transmitting apparatus as set forth in claim 36, wherein said stream of non-real time packets is text data.

38. (Previously presented) The data transmitting apparatus as set forth in claim 36, wherein said streams of real time packets are moving picture and audio data.

39. (Previously presented) The data transmitting apparatus as set forth in claim 36, wherein said stream transmitting portion transmits a real time packet of said streams of real time packets only after confirming the presence of said real time packet request.

40. (Previously presented) The data transmitting apparatus as set forth in claim 39, wherein said real time packet request is a request to transmit said real time packet.

41. (Previously presented) The data transmitting apparatus as set forth in claim 39, wherein transmission of said real time packet is separated in time from another real time packet by at least a transmission interval, said real time packet and said another real time packet being from one of the streams of real time packets.

42. (Previously presented) The data transmitting apparatus as set forth in claim 39, wherein said real time packet is transmitted after determining that a transmission end time for said one of the real time packets is earlier than a transmission end time for any other of the real time packets.

43. (Previously presented) The data transmitting apparatus as set forth in claim 42, wherein said real time packet is transmitted prior to transmission of said any other of the real time packets.

44. (Previously presented) The data transmitting apparatus as set forth in claim 36, wherein said stream transmitting portion transmits a non-real time packet of said stream of non-real time packets.

45. (Previously presented) The data transmitting apparatus as set forth in claim 44, wherein said non-real time packet is transmitted during a time interval between transmissions of the real time packets when said time interval is longer than a transmission time for the non-real time packet.

46. (Previously presented) The data transmitting apparatus as set forth in claim 44, wherein said non-real time packet is transmitted prior to transmitting the real time packets when a transmission end time for the non-real time packet occurs before scheduling times for the real time packets.

47. (Previously presented) The data transmitting apparatus as set forth in claim 46, wherein said transmission end time for the non-real time packet and said scheduling times are compared only after confirming the presence of said non-real time packet request.

48. (Previously presented) The data transmitting apparatus as set forth in claim 47, wherein said non-real time packet request is a request to transmit a non-real time packet.

EVIDENCE APPENDIX

There is no other evidence that will directly affect or have a bearing on the Board's decision in this appeal.

RELATED PROCEEDINGS APPENDIX

There are no other appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.